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(54) PHOTOSYNTHESIS-RELATED GENE AND PROMOTOR THEREOF

(57)Abstract:

PURPOSE: To enable obtaining of a useful plant variety modification by cloning a gene of light-harvesting chlorophyll a/b bound protein LHCP II) derived from rice plant.

CONSTITUTION: A genomic library derived from rice plant is screened by using part (about 260 bases including the 5'-side nontranslatable region to the N- terminal of mature protein) as a probe to provide a positive clone. The base sequence of the resultant positive clone is then determined by a dideoxy method to afford a base sequence (A) of an LHCP II gene containing a base sequence from the -785th to the +59th residues of formula I and a promoter region thereof. The promoter part of the aforementioned ingredient (A) is subsequently excised and linked to the upstream side of a β -glucuronidase (GUS) gene contained in pB1101 which is a plant vector to produce a vector such as a plasmid pLH/GUS expressed by formula II for plant cells.

Figure 1 shows the base sequence of the LHCP II gene. The sequence is shown in the 5' to 3' direction. The sequence is as follows: (The actual sequence is not legible due to image quality, but it is a long string of nucleotide bases.)



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